Claims

1. Method for estimating the interference power increase in the uplink direction due to a transaction in a spread spectrum cellular telecommunication system, **characterized** in that the interference power increase estimate is calculated at least partly on the basis of
- current fractional load,
- current received interference power level, and
- a load factor, which is calculated essentially on the basis of the chiprate, the bitrate of the new transaction, and the estimated required signal-to-interference ratio for the service type of the new transaction.

2. The method of claim 1, **characterized** in that said load factor ΔL is calculated essentially as

$$\Delta L = \frac{1}{1+\frac{W}{SIR \cdot R}}$$

where W is the chiprate, R is the bitrate of the new transaction, and SIR is the estimated required signal-to-interference ratio for the service type of the new transaction.

3. The method of claim 1, **characterized** in that the interference power increase estimate ΔP_{rx_total} is calculated essentially as

$$\Delta P_{rx\_total} = \frac{\Delta L}{1-\eta-\Delta L} P_{rx\_total}$$

where η is the current fractional load.

4. The method of claim 1, **characterized** in that the interference power increase estimate ΔP_{rx_total} is calculated essentially as

$$\Delta P_{rx\_total} = \frac{\Delta L}{1-\eta} P_{rx\_total}$$

where η is the current fractional load.

5. The method of claim 1, **characterized** in that the transaction is a new connection.

6. The method of claim 1, **characterized** in that the transaction is the transmission of a data packet.

7. Admission control method in a spread spectrum cellular telecommunication system, **characterized** in that the method comprises steps in which
- the current received interference power is measured at a receiver,
- the interference power increase due to a new requested connection is estimated at least partly on the basis of current fractional load, current received interference power level, and a load factor, which is calculated essentially on the basis of the chiprate, the bitrate of the new connection, and the estimated required signal-to-interference ratio for the service type of the new connection,
- the sum of said current received interference power and said interference power increase is compared to a treshold, and
- resources are allocated for the new requested connection, if said sum is smaller than said treshold.

8. The method of claim 7, **characterized** in that said load factor ΔL is calculated essentially as

$$\Delta L = \frac{1}{1 + \frac{W}{SIR \cdot R}}$$

where W is the chiprate, R is the bitrate of the new connection, and SIR is the estimated required signal-to-interference ratio for the service type of the new connection.

9. The method of claim 7, **characterized** in that the interference power increase estimate ΔP_{rx_total} is calculated essentially as

$$\Delta P_{rx\_total} = \frac{\Delta L}{1 - \eta - \Delta L} P_{rx\_total}$$

where η is the current fractional load.

10. The method of claim 7, **characterized** in that the interference power increase estimate ΔP_{rx_total} is calculated essentially as

$$\Delta P_{rx\_total} = \frac{\Delta L}{1 - \eta} P_{rx\_total}$$

where η is the current fractional load.

11. Method for scheduling data packets in a spread spectrum cellular telecommunication system, **characterized** in that the method comprises steps in which
- the current received interference power is measured at a receiver,
- the interference power increase due to a transmission of a new packet is estimated at least partly on the basis of current fractional load, current received interference power level, and a load factor, which is calculated essentially on the basis of the chiprate, the bitrate to be used in transmission of the packet, and the estimated required signal-to-interference ratio for the successful transmission and reception of the packet,
- the sum of said current received interference power and said interference power increase is compared to a treshold, and
- resources are allocated for the transmission of the packet, if said sum is smaller than said treshold.

12. The method of claim 11, **characterized** in that said load factor ΔL is calculated essentially as

$$\Delta L = \frac{1}{1+\frac{W}{SIR \cdot R}}$$

where W is the chiprate, R is the bitrate which will be used in transmission of the packet, and SIR is the estimated required signal-to-interference ratio for the succesful transmission and reception of the packet.

13. The method of claim 11, **characterized** in that the interference power increase estimate ΔP_{rx_total} is calculated essentially as

$$\Delta P_{rx\_total} = \frac{\Delta L}{1-\eta-\Delta L} P_{rx\_total}$$

where η is the current fractional load.

14. The method of claim 11, **characterized** in that the interference power increase estimate ΔP_{rx_total} is calculated essentially as

$$\Delta P_{rx\_total} = \frac{\Delta L}{1-\eta} P_{rx\_total}$$

where η is the current fractional load.

15. System for estimating the interference power increase in the uplink direction due to a new transaction in a spread spectrum cellular telecommunication system, **characterized** in that
the system comprises means for calculating the interference power increase estimate at least partly on the basis of
- current fractional load,
- current received interference power level, and
- a load factor ΔL,
and means for calculating said load factor essentially on the basis of the chiprate, the bitrate of the new transaction, and the estimated required signal-to-interference ratio for the service type of the new transaction.

16. The systen of claim 15, **characterized** in that said means for calculating said load factor are means for calculating the load factor as

$$\Delta L = \frac{1}{1 + \frac{W}{SIR \cdot R}}$$

where W is the chiprate, R is the bitrate of the new transaction, and SIR is the estimated required signal-to-interference ratio for the service type of the new transaction.

17. Network element of a cellular telecommunications network, **characterized** in that the network element comprises means for calculating an interference power increase estimate due to a new transaction at least partly on the basis of
- current fractional load,
- current received interference power level, and
- a load factor ΔL,
and means for calculating said load factor essentially on the basis of the chiprate, the bitrate of the new transaction, and the estimated required signal-to-interference ratio for the service type of the new transaction.

18. The network element of claim 17, **characterized** in that said means for calculating the load factor are means for calculating the load factor as

$$\Delta L = \frac{1}{1 + \frac{W}{SIR \cdot R}}$$

where W is the chiprate, R is the bitrate of the new transaction, and SIR is the estimated required signal-to-interference ratio for the service type of the new transaction.

19. The network element of claim 17, **characterized** in that the network element is a radio network controller.

20. The network element of claim 17, **characterized** in that the network element is a radio network controller of the UMTS cellular system.